MD6240

Rotary Drill

Basic Specifications

Hole Diameter	152-270 mm (6-10.625 in)
Bit Load	24 000 kg (52,911 lb)
Hole Depth Single-pass (12 m/39 ft mast)	Up to 12.80 m (42 ft)/Multi-pass Up to 55.47 m (182 ft)
Hole Depth Single-pass (15 m/49 ft mast)	Up to 15.85 m (52 ft)/Multi-pass Up to 31.08 m (102 ft)
Engine Cat® C27 Tier 2	597 kW (800 hp) at 2,100 rpm
Compressor	48 m^3/min (1,700 ft^3/min) 6.9 bar (100 psi)

MD6240 Features:

Solid Structures
A strong foundation for continuous drilling in harsh conditions, MD6240 is designed for long life with features such as a mast with double cut lacing, integral A-frame design, and a solid mainframe with low deflection rates in stress areas.

Power Group
Fast cycle times are achieved through top of class bit load, rotary head horsepower, bailing air and a multitude of time-saving systems for maximum efficiency.

Carousel Pipe Rack
Rapid pipe changes that are safe, efficient and completely controlled from inside of operator's cab. A hydraulic break out wrench and deck wrench assist in breaking thread connections quickly and effectively. Dual hammer Tricone Pipe Rack allows for rapid conversion between tricone and DTH drilling in less than five minutes.

Operator Safety and Comfort
Keep your operators comfortable, productive and safe in our spacious and quiet cabs with high visibility.

Serviceability and Customer Support
Easy maintenance and a long life cycle is yours with high quality Cat Drills and reliable customer support.

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Proven Performer

Low-cost of ownership, highly productive and long lasting

High productivity and low cost of ownership is yours with the MD6240 Rotary Drill. With bit load force of 24 000 kg (52,911 lb) and the capability to drill depths up to 55.47 m (182 ft) the MD6240 is well equipped to drill in hard or soft rock applications. Built to be reliable, safe and easy to service for years to come.

Solid Structures

To withstand your harsh quarry and mining environments

Best built for long life, the MD6240 has heavy-duty structures. The mast, integral A-frame, and mainframe are durable providing a strong platform needed for drilling in harsh conditions. The MD6240 is equipped to perform in challenging environments and provides high availability, positively impacting your bottom line.

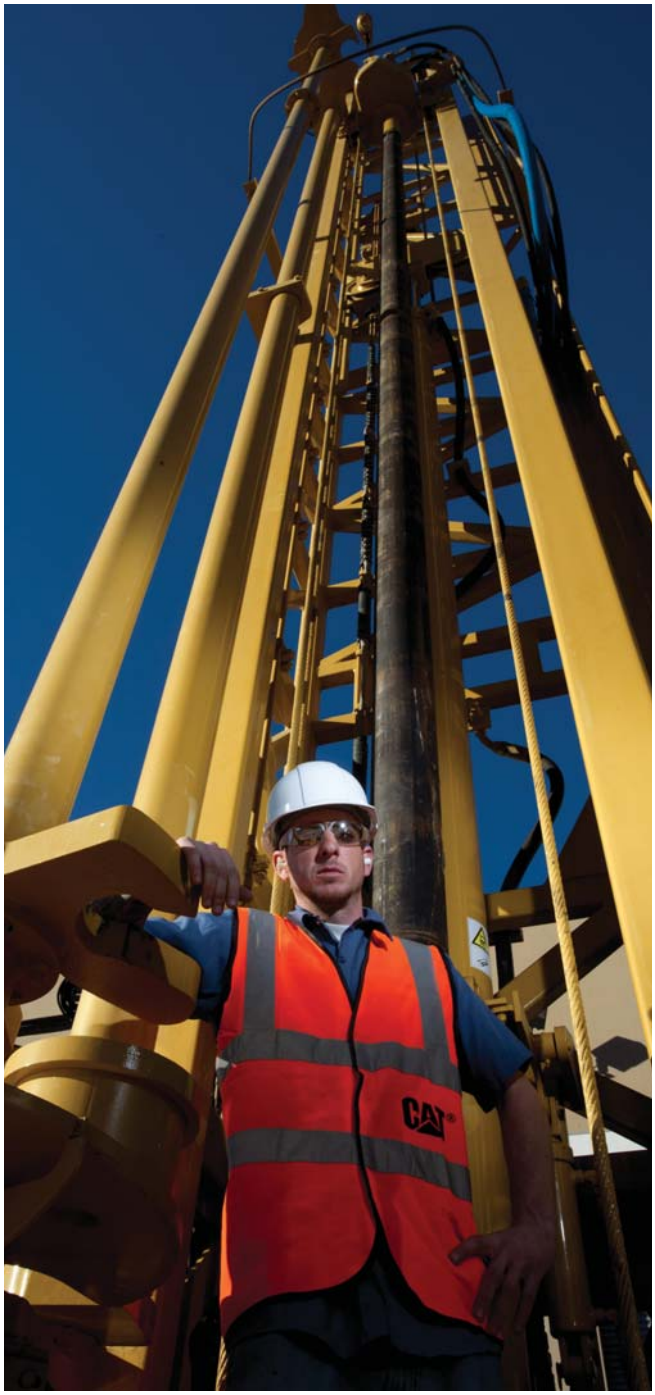
All welded structures are made in house and they comply with AWS 14.3 welding standard. The welded structures are inspected after the manufacturing process providing reliable, maintenance free and long lasting platform for the drill.

Sturdy Mast

- The mast is made of heavy-duty ASTM A500 Grade B steel tubing on all four chords and cross members, which creates a torsionally strong mast structure and reduces the material fatigue.
- All mast structures are designed with double-cut lacing in high stress areas to prevent cracking and assure long life.
- The mast can be raised or lowered with full pipe rack and full drill string on the rotary head, in less than 40 seconds.

Heavy-Duty Frame

- The A-frame is an integral extension of the mainframe, providing a strong, low maintenance design.
- The mainframe design assures structural integrity. The main rails, made of ASTM A500, Grade B, rectangular steel tubing, are heavily cross-braced and reinforced in high stress areas.



Undercarriage

- Three point oscillating suspension allows the drill to negotiate rugged, uneven terrain without transferring excessive torsional forces to the mainframe, and allows continued stability while tramming between holes.
- Tram speed is 2.0 km/h (1.25 mph). Gradeability is 66% with the mast down.
- Ground clearance: 610 mm (24 in)
- Bearing ground pressure: 0.83 bar (12 psi)

Power Group

High on efficiency; low on cost

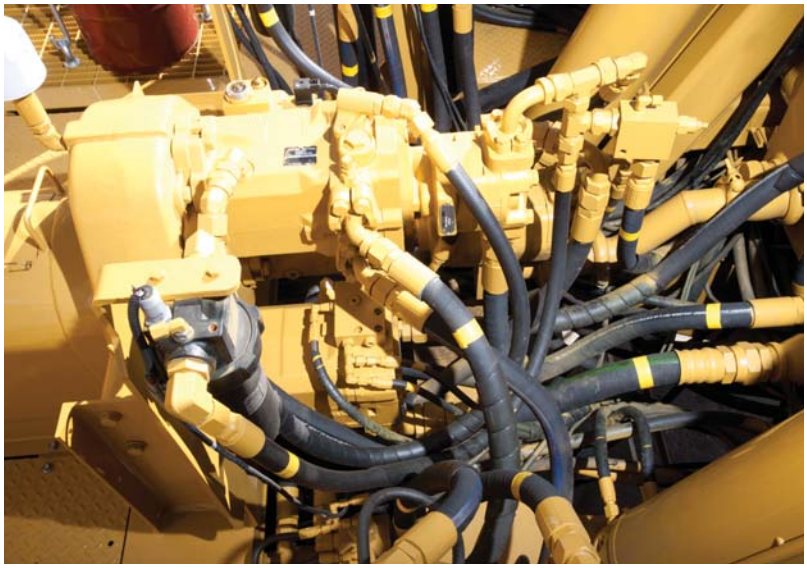
To achieve low cost, high efficiency drilling, your power group configuration is selected to match the needs of your specific geology and site conditions. We have numerous configurations for low pressure rotary drilling or high pressure DTH hammer drilling. Power groups are arranged in-line for easy access, from both sides, to the engine, compressor, hydraulic pumps, plumbing and other components, which translates into safer serviceability and lower maintenance cost.

Engines

To match your application demands, MD6240 has three choices for engine sizes. Cat C27 ACERT™ @ 597 and 652 kW (800 and 875 hp) @ 2,100 rpm or a Tier 2 QST-30 @ 783 kW (1,050 hp) @ 2,100 rpm.

Each package includes:

- Fuel-filtration package to overcome harsh mining environments
- Pre-lube system for extra engine protection
- Dry type inlet air cleaner with safety elements
- Heavy duty muffler and muffler guard
- Turbo and manifold blanket covers
- Set of batteries
- Coolant conditioner
- Fuel tank



Compressor

For efficient flushing of cuttings and dust out of the bore hole, the air compressor delivers the right amount of bailing air based on hole diameter, depth and material density. Air-on-demand control system regulates air intake to match the amount of compressed air being used.

Standard Compressor is Low Pressure for Rotary Drilling Mode

- Single stage, positive displacement, oil-flooded, single-stage screw type compressor
- Discharge air flow (sea level) 48 m^3/min (1,700 ft^3/min)
- Maximum operating pressure 6.9 bar (100 psi)

Optional Compressor is High Pressure for DTH Hammer Drilling Mode

- High pressure, oil-flooded, two-stage screw type
- Discharge air flow (sea level) 33 m^3/min (1,150 ft^3/min); 38 m^3/min (1,350 ft^3/min); 43 m^3/min (1,500 ft^3/min)
- Maximum operating pressure 10.3/24.1/34.5 bar (150/350/500 psi)

Cooler

For ample capability, our cooler systems are designed to assure unrestricted airflow and reduce excessive operating heat, which extends life of engine, compressor, and hydraulic components.

- Rated up to 52° C (125° F) ambient cooling capacity
- Split or single cooler
- Side by side engine radiator
- Charge air cooler section
- Hydraulic oil cooler section
- Stacked compressor oil section
- Replaceable cores
- Fan arrangements are suited to the powertrain configuration
- Mounted on an isolated skid to reduce vibration, limit load transfer and noise

Hydraulic System

The pump drive is powered by direct input from the engine using a maintenance free rubber mounted coupling. The result is a longer power train life as less shock is absorbed. The coupling housing is fully enclosed with a hinged access hatch for visual inspection.

Hydraulic Pump Drive

- Two axial piston pumps for the pulldown and rotation systems or track propel functions.
- One axial piston pump for the cooling fans and auxiliary functions.
- Two gear pumps supply power to the dust collector and water injection systems.

Mast System

Strong and sturdy

To assure long life, all mast structures are designed with double-cut lacing in high stress areas. There are several application-specific masts to choose from.

Mast Height	12 m (39 ft)	15 m (49 ft)
Pipe Length	10.67 m (35 ft)	15.24 m (50 ft) [two 7.62 m (25 ft) pipes]
Single Pass Depth	12.8 m (42 ft)	15.8 m (52 ft)
Pipe Diameter	114-178 mm (4.5-7.0 in)	114-178 mm (4.5-7.0 in)
Pipe Wall Thickness	19 mm (0.75 in)	19 mm (0.75 in)

Pulldown and Hoist

A single, double-acting cylinder, cable pull-down system produces 22 680 kg (50,000 lb) of pull-down force and 22 680 kg (50,000 lb) of hoist force. The cylinder rod is fixed on both ends with a moving barrel, providing high efficiency and reducing feed system wear and maintenance.

- One variable displacement axial piston pump in an open loop system
- Bit load up to 24 000 kg (52,911 lb)
- Feed and hoist speed 0-38 m/min (0-125 ft/min)

Cables

The MD6240 drill is designed with mast cables instead of chains. Cables have a predictable wear profile and do not unexpectedly fail. They can be repaired quickly and easily, and they absorb and evenly dissipate vibrations, which promotes longer mast life.

Auto Tensioning

A cable auto-tensioner ensures maximum cable service life with minimum maintenance by automatically keeping cables tight via a series of hydraulic cylinders applying constant pressure. Cables for the MD6420 are 2.85 cm (1⅛ in) in diameter, and rated at 79 tons (173,800 lb) nominal strength.

Rotary Drill Head (1)

Achieve optimal penetration rates with the ability to select the most suitable rotation speed for your application. One fixed displacement, axial piston motor provides 139 kW (186 hp) with rotation speed 0-220 rpm. Torque reaches 12 880 N·m (9,500 lbf-ft). Heavy-duty, reliable drill head includes a 140 mm (5.5 in) bull-shaft connection to the drill string and has adjustable steel guides with replaceable pads for even travel on main chords. The long head carriage design ensures the rotary head rides the main chords evenly.

Angle Drilling

The MD6420 can drill in angles up to 25 degrees (in 5 degree increments). Dual mast locks are located under the deck and hydraulically operated dust curtains are available for angle drilling.

Pipe Rack Carousel (2)

The hydraulically operated carousel-type pipe changer is located outside of the mast structure, and all functions are controlled from a console in operator's cab, which assures efficient and safe drill string changes and storage.

The carousel provides automatic indexing of drill pipes in relation to the rotary head.

- Pipe diameter 114-178 mm (4.5-7.0 in)
- 12 m (39 ft) mast arrangement 4 pods; 10.67 m (35 ft) long pipe
- 15 m (49 ft) mast arrangement 2 pods; 15.24 m (50 ft)/ two 7.62 m (25 ft) long pipe

Pipe Positioner

To help you align the pipe string while adding or detaching pipes, or in angle hole drilling, our automatic pipe positioner, hydraulically activates to grip the pipe and guide it straight through the deck bushing.

Hammer/Tricone Pipe Rack

To accommodate differences in rock consistency, a patented Hammer/Tricone Pipe Rack allows for rapid conversion between tricone drilling for soft drilling conditions, and DTH drilling, for hard rock, in less than five minutes.

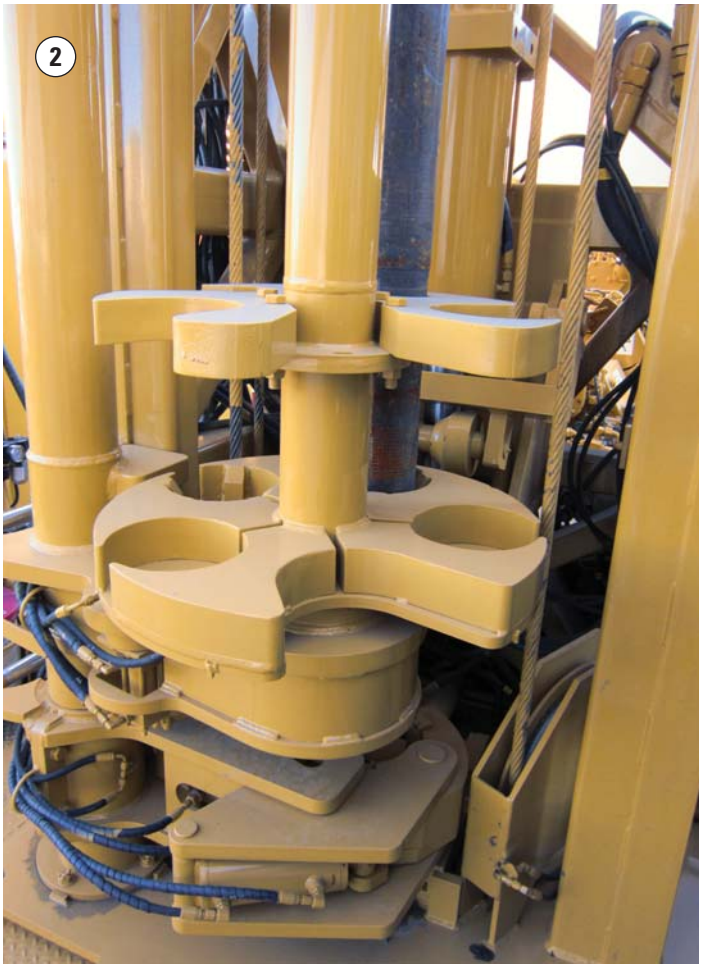
Hydraulically Operated Break Out and Deck Wrench (3)

Adding to your productivity the HOBO works in concert with a highly effective deck wrench.

- Mounted on the outside mast structure
- Four-cylinder system for swing-adjust-rotate-clamp
- Operated from inside the cab

Overhead Winch

To assist in safe and efficient handling of drill pipes, bits, subs and other heavy accessories, there is an auxiliary winch rated for up to 3629 kg (8,000 lb) capacity. Operation is from the operator's cab, or optional remote control.



Dust Collection

Largest chamber in the industry

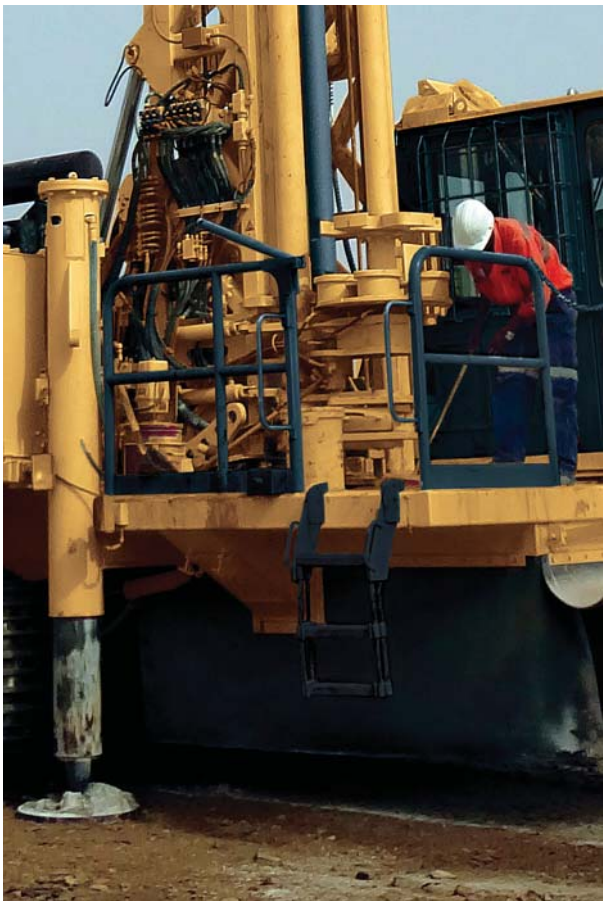
For efficient dust collection MD6240 has a dust collector rated at 127 m^3/min (4,500 ft^3/min) and separate water injection system. Both dry and water injection systems can be mounted on the same drill.

- Water injection system options:
  - Three tanks totaling 1271 L (336 gal) mounted under the front deck or
  - One tank 1514 L (400 gal) mounted on top-deck (mounted in place of Dry Dust Collector)

Dust Curtain

With the largest dust chamber in the industry, the MD6240 has a total enclosed area of 4.2 m^2 (45.14 ft^2) and is surrounded by heavy rubber curtains. This provides ample space for dust containment while deep hole drilling and the resulting cutting piles. Optional hydraulic front and rear dust curtain lifters are available to ensure cuttings are not pulled back into the hole while tramming from point to point on the blast pattern.

- Material 6 mm (0.25 in) rubber nylon reinforced
- Split for excess with 305 mm (12 in) overlap
- Dust deflector is a natural rubber seal, 13 mm (0.5 in) thick, 356 mm (14 in) diameter



Fully Equipped Cab

For operator safety and comfort

Safe and Effortless Operation

To limit operator fatigue the MD6240 controls are ergonomic. The FOPS certified cab has tinted safety glass windows and a closed circuit camera system for 360° visibility. Two heavy-duty doors provide quick egress to the drill table or the main deck.

Additional Safety Features

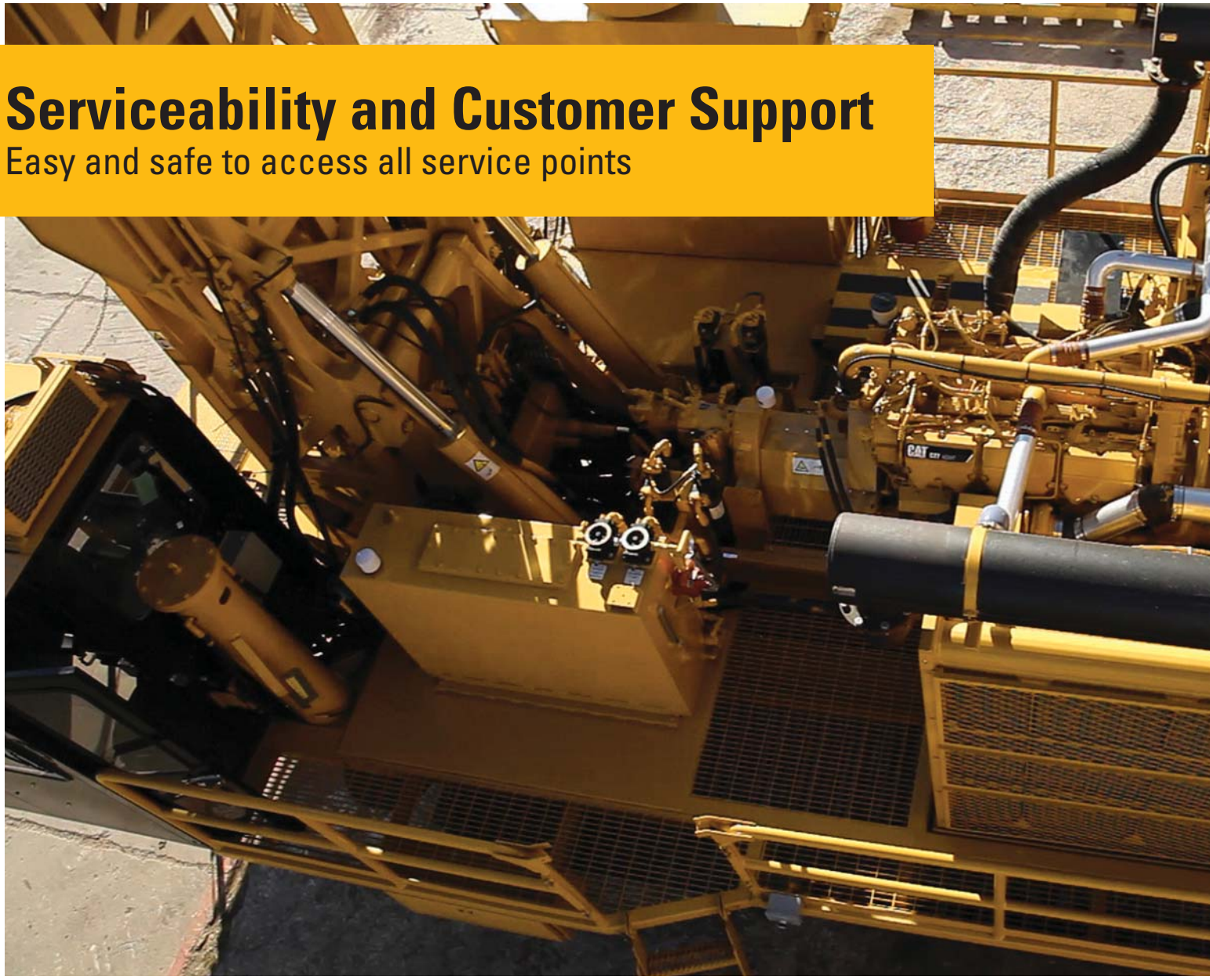
- 45° control console, in relation to deck, assures good overview of drill table
- Closed-circuit camera system
- Two heavy-duty swing doors for convenient cab access
- Low sound and vibration levels
- Emergency ingress/egress
- Multiple engine stops
- Four leveling jacks ensure a minimum of three machine points of ground contact at all times
- The pipe handling system is designed so breaker plate is located at operator's eye level
- All auxiliary functions are controlled by fingertip toggle switches and marked with "no language barrier" symbols describing each function
- Fixed folding trainers seat
- Window washers and wipers

Spacious and Quiet Cab

For comfortable and efficient operation, the MD6240 cab offers operators 3 m^2 (32 ft^2) of floor area allowing ample room with a swiveling operator's seat equipped with armrests and a headrest. The ergonomic console provides well organized controls labeled with international ISO symbols for each function. The cab is shock mounted and insulated for quiet operation below 80 dB(A). Heated and air conditioned, operator comfort is attainable in all climates.

Serviceability and Customer Support

Easy and safe to access all service points



Large Main Deck

The MD6240 large deck (front and rear) plus wide walkways assure a safe operating area and more efficient maintenance. Access to walkways are on both sides of drill for quick access to all major components for daily pre-start checks, preventive maintenance and adjustments. The stationary drill table/rear deck (mast/cab area) provides access to the mast area and to the main deck during all drilling modes, including angle drilling. Immediate access to the power group including the engine, compressor, hydraulic pumps, plumbing and other components, translates into better serviceability and lower maintenance cost.

Supported by World-class Cat Dealer Network

With the support of the Cat global dealer network, you can rely on unmatched service, integrated solutions, after-sales support, fast and efficient parts fulfillment, and world-class remanufacturing capabilities.

The Cat Parts and Service Network offers you the most comprehensive product support system in the industry. Everything we do is designed to keep you up and running longer, for less. Cat authorized and certified mechanics are trained in the latest diagnostic equipment, tools and service techniques. They know exactly what to look for, and exactly how to fix it.

One of the prime cornerstones of the Cat Parts and Service Network is availability. No matter where you are, no matter what day of the week or time of day, Cat Parts and Service is never far away. At each location, you have instant access to everything from information on maintenance options, engine selection and repair, to a full range of genuine Cat Parts and Remanufactured components.

The fact is, a vast majority of the parts you'll ever need are on hand at your local dealer, right off the shelf. And in the rare event a specific part is not on hand, your dealer can usually get it to you within 24 hours, utilizing our computerized parts location network.

From helping you choose the right machine to knowledgeable ongoing support, Cat dealers provide the best in sales and service.

- Preventive maintenance programs and guaranteed maintenance contracts
- Best-in-class parts availability
- Operator training to help boost your production
- Genuine Cat Remanufactured parts

Technology

Cat® MineStar™ System – Terrain for Drilling

More Value for Your Mine

Mining is a function of a number of processes, and it is important to consider the impact that optimal drilling and blasting has on your downstream mining activities such as loading, hauling, crushing, and milling.

Technology that helps you optimize and improve drill and blasting operations can positively impact your productivity and overall efficiency of the entire mining cycle. Terrain, a capability set of Cat MineStar System, enables you to precisely manage drilling through the use of guidance technology. It increases your machine productivity and provides you real-time feedback for improved efficiency.

Terrain Features

- Accurately guides the operator
- Reports on drill and operator productivity
- Allows remote, real-time supervision of drilling activity and blast planning
- Improves the accuracy of drilling depth
- Provides feedback on the variation of bench geology
- Improves safety and efficiency by keeping the operator in the cab
- Records and measures multiple drill parameters to optimize machine utilization and improve the overall efficiency of drilling and blasting operations
- Uses Global Navigation Satellite System (GNSS) to provide three-dimensional positioning of the bit ensuring holes are drilled according to the designed drill pattern
- Offers a number of options enabling users to identify the features required by their mine site and then tailor the system to meet specified needs

Additional Benefits

- Prior hole location
- Border guard
- Pipe-in-hole
- Global Navigation Satellite System
- Increased efficiency of design and surveying activity
- Identifies local variations in bench geology for developing specific hole loading instructions
- Recording is comprehensive for calculating machine utilization and productivity statistics

Safety

Because it's your priority

We know keeping operators safe is a priority. Throughout Cat Drills you will find features that are designed to do just that.

- Operators are comfortable, more productive and safe in our spacious and quiet cab
- Cab is FOPS certified with tinted safety glass windows and a closed circuit camera system for 360° visibility
- The Carousel Pipe Rack is controlled from inside of operator's cab
- A hydraulic break out wrench and deck wrench assist in breaking thread connections from inside the cab
- Three point oscillating suspension allows the drill to negotiate rugged, uneven terrain without transferring excessive torsional forces to the mainframe, and allows continued stability while tramming between holes
- Power groups are arranged in-line for easy access, from both sides, to the engine, compressor, hydraulic pumps, plumbing and other components, which translates into safer serviceability
- Mast uses cables which have a predictable wear profile and do not unexpectedly fail like chains
- An auxiliary winch rated for up to 3629 kg (8,000 lb) capacity, assists in handling of drill pipes, bits, subs and other heavy accessories and equipment from the cab or via remote control
- Two heavy-duty doors provide quick ingress/egress from cab to the drill table or the main deck
- Ground-level machine isolation and lock out box
- Multiple engine stops
- Four leveling jacks ensure a minimum of three machine points of ground contact at all times

Sustainability

Using resources wisely

Sustainable development for Caterpillar means leveraging technology and innovation to increase efficiency and productivity with less impact on the environment and helping you do the same – enabling your businesses to become more productive by providing products, services and solutions that use resources more efficiently.

Engines with Advanced Technology

Cat ACERT engines with advanced technology have lower emissions without compromising performance or fuel efficiency.

Extended Life

Mast structure is designed for long life and is a base for major overhauling and continued use after standard operational life. Jack casing structures, A-frame/mast pivot and the deck are integrally welded to the mainframe assuring a sound structural base with the ability to be rebuilt.

Sustainability Features

Fuel savings is achieved with our variable speed fans that match cooling demand. The coolers have replaceable cores.

The pump drive is powered by direct input from the engine using a maintenance free rubber mounted coupling. The result is a longer power train life as less shock is absorbed.

Rated Capacity

Bit/hole diameter	152-270 mm	6-10.625 in
Depth single-pass (12 m/39 ft mast)	Up to 12.80 m	Up to 42 ft
Depth multi-pass (12 m/39 ft mast)	Up to 55.47 m	Up to 182 ft
Depth single-pass (15 m/49 ft mast)	Up to 15.85 m	Up to 52 ft
Depth multi-pass (15 m/49 ft mast)	Up to 31.08 m	Up to 102 ft

Operating Temperature

Minimum ambient rating (standard)	–28° C	–20° F
Cold weather option	–40° C	–40° F
Maximum ambient rating (standard)	52° C	125° F
Altitude	Up to 4572 m	Up to 15,000 ft

Pull-down/Hoisting Capacity

Rated pull-down capacity	Up to 222 kN	Up to 50,000 lbf
Rated hoist capacity	Up to 222 kN	Up to 50,000 lbf
Drilling feed/retract rate	0-38.1 m/min	0-125 ft/min
Type	Closed-loop, hydraulic (stationary rod, moving barrel)	
Number of cylinders	1	
Pull-down cylinder stroke (12 m/39 ft)	7.27 m	286.2 in
Head travel (12 m/39 ft)	14.54 m	572.4 in
Pull-down cylinder stroke (15 m/49 ft)	8.80 m	346.5 in
Head travel (15 m/49 ft)	17.60 m	693.0 in
Cylinder bore diameter	165 mm	6.5 in
Cylinder rod diameter	102 mm	4 in
Cable type 25 mm (1 in)	DYFORM 8	
Cable sheaves (cylinder) OD	406 mm	16 in
Cable sheaves (top and bottom) OD	508 mm	20 in
Sheave guards	Standard at bottom plate	
Adjustable head guide shoes	Steel with replaceable Nylatron	
Automatic cable	Hydraulic cylinder, tensioning system powered by fan circuit	

Rotary Drive System

Rotation speed	0-220 rpm	
Torque	0-12 880 N·m	0-9,500 ft-lb
Horsepower capacity	139 kW	186 hp
Gearbox	Casting design	
Main thrust bearing	Taper roller	
Lubrication	Oil-flooded	
Gearing	Straight spur	
Ratio	16:1	
Drive motor	See Hydraulic System	

Cooler Assembly

Split coolers, air-finned, three- or four-core, radiator/hydraulic stacked, compressor separate		
Radiator/hydraulic cooler		
Height	1473 mm	58 in
Width	1473 mm	58 in
Compressor cooler		
Height	1829 mm	72 in
Width	1626 mm	64 in
Fan diameter (one fan per cooler, 10 blades)	1219 mm	48 in
Fan speed – maximum	1,525 rpm	
Fan guard	Welded	
Engine radiator, top tank	Sealed deaeration tank, pressure cap, overflow tube and sight glass	
Standard ambient rating	52° C	125° F

MD6240 Rotary Drill Specifications

Compressor (Standard)

Type	Oil-flooded, single-stage screw	
Discharge air flow (sea level)	48 m³/min	1,700 ft³/min
Maximum operating pressure	6.9 bar	100 psi
Air cleaner type	Dry-type with safety element Model SRG 20	
Oil cooling	Air-to-oil cooler, thermostatically controlled	
Oil separation	Vertical barrier element, pre-separation in 189 L (50 gal) horizontal sump (T-tank)	
Oil filtration	12 micron replaceable element	
Drive	Direct coupled to engine flywheel	
Controls	Automatic with safety shut-down	
Air shut-off	Hydraulic cylinder-operated from operator's seat	

Compressor (Optional)

Type (high pressure)	Oil-flooded, two-stage screw	
Discharge air flow (sea level)	33 m³/min (1,150 ft³/min); 38 m³/min (1,350 ft³/min); 43 m³/min (1,500 ft³/min)	
Maximum operating pressure	10.3/24.1 bar or 10.3/24.1/ 34.5 bar	150/350 psi or 150/350/ 500 psi
Air cleaner	Dry-type with safety element/ SRG 29	

Engine (Standard) – C27 Tier 2

Manufacturer	Caterpillar	
Model	C27 Tier 2	
Rated horsepower	597 kW	800 hp
Optional rated horsepower	652 kW	875 hp
Full load	2,100 rpm	
Starting system	24V DC	
Safety shut-down system	Energized to run	
Air cleaner type	Dry-type with safety element Model SRG 20	
Batteries	Four (4) 8-D	
Muffler (inlet and outlet)	127 mm	5 in
Muffler guard	10 gauge for personal protection	
Jacket water cooling/CAC	Radiator	
Fuel tank	1325 L	350 gal
Optional fuel tank	1571 L	415 gal
Turbo and manifold covers	Blankets and/or exhaust wrap	

Engine (Optional) – QST-30

Model	QST-30 (Non-Cert)	
Rated horsepower	783 kW	1,050 hp
Optional Tier 2 rated horsepower	783 kW	1,050 hp
Full load	2,100 rpm	
Starting system	24V DC	
Safety shut-down system	Energized to run	
Air cleaner type	Dry-type with safety element Model SRG 29	
Batteries	Four (4) 8-D	
Muffler (inlet and outlet)	127 mm	5 in
Muffler guard	10 gauge for personal protection	
Jacket water cooling	Radiator	
Fuel tank	1325 L	350 gal
Optional fuel tank	1571 L	415 gal
Turbo and manifold covers	Blankets and/or exhaust wrap	

Mast

Construction	ASTM 500 grade B rectangular tubing, welded	
Pivot and raising area	Rectangular tubing A-frame; reinforced in high-stress areas	
Hydraulic lines	Pressure-rated steel hydraulic tubing	
Hose tray	Sheet steel trough for moving hoses	
Table hole diameter (diameter deck hole for guide bushing)	279 mm	11 in

Mast-Elevating Cylinders

Number of cylinders	2	
Cylinder bore diameter	203 mm	8 in
Cylinder rod diameter	102 mm	4 in
Cylinder stroke	1082 mm	42.6 in
Lift capacity each cylinder	556 kN	125,065 lbf
Cylinder connections pins diameter	57 mm	2.25 in

Operator's Cab

Type	Shock-mounted; two-man, integrated FOPS certified	
Length at floor	1981 mm	78 in
Width at floor	1518 mm	59.75 in
Floor area	3 m^2	32.4 ft^2
Height inside	1943 mm	76.5 in
Construction	12 gauge steel welded to formed 12 gauge channel and angle supports	
Windows (tinted safety glass in rubber mounting)	6 mm	0.25 in
Number of windows	10	
Number of doors	2 with windows (included above)	
Left door to work deck	Swing-type HD hinge	
Right door	Swing-type HD hinge	
Operator's seat	One swivel-type with armrests, headrest and retractable seat belt	
Helper's seat	Fixed folding jump seat	
Insulation, wall and ceiling (thermal)	25 mm	1 in
Insulation, floor [closed cell foam with 3 mm (0.125 in) pyramid vinyl surface]	10 mm	0.375 in
Door latches	Heavy-duty latches with lockable handles	
Sound levels	80 dB(A) or less	
Climate control	Wall-mounted, AC/heating/ pressurizing unit	
Other	Window wipers and washers	

Undercarriage

Type	Excavator type	
Pad width	750 mm	29.5 in
Pad type	Triple grouser	
Rollers	Sealed, oil-flooded	
Number of lower rollers	12	
Upper track chain support	Two (2) carrier rollers	
Rock guards/chain guides	Standard full-length guards	
Overall length	5705 mm	224.6 in
Width over tracks	3912 mm	154 in
Final drive	Independent hydrostatic motors	
Maximum drive horsepower per track	152 kW	204 hp
Brakes	Spring set, hydraulic release	
Tram speed maximum	2.0 km/h	1.25 mph
Gradeability mast down	66%	
Rear axle (solid)	203 mm	8 in
Front axle	Three-point oscillating type	

Mainframe

Main rails (ASTM 500 Grade B rectangular tubing heavily cross-braced and reinforced at high-stress areas)	203 mm × 406 mm × 13 mm	8 in × 16 in × 0.5 in
Construction	Electric welded	
Jacks, mast pivot and deck	Welded integrally to mainframe	
Toolbox	Lockable door, below front deck	
Machine deck	Access both sides	
Handrails		
Diameter	48 mm	1.9 in
Height	1219 mm	48 in
Tow hooks	Welded, two (2) front	

MD6240 Rotary Drill Specifications

Mainframe – Leveling Jacks

Number	4	
Location	2 front; 2 rear	
Cylinder bore	140 mm	5.5 in
Cylinder rod diameter	76 mm	3 in
Cylinder stroke	1524 mm	60 in
Lift capacity	290 kN	65,300 lbf
Pad connection	Link pad	
Pad diameter	610 mm	24 in
Counterbalance valves	Internal at each cylinder	
Inner extension boot		
Outside diameter	219 mm	8.625 in
Wall	8 mm	0.322 in

Drill Table and Work Deck

Table height off ground	1321 mm	52 in
Deck floor material	Non-skid sheet metal	
Drill deck length	2661 mm	104.75 in
Drill deck width	2578 mm	101.5 in
Drill deck area	6.8 m^2	73.8 ft^2

Dust Suppression

Dust collector capacity	127 m^3/min	4,500 ft^3/min

- Both dry and water injection can be mounted on the same drill
- Water injection system choices:
  - Three tanks totaling 1271 L (336 gal) mounted under the front deck
  - One tank 1514 L (400 gal) mounted on top-deck (mounted in place of Dry Dust Collector)

Note: Dry Dust Collector and water injection on the same drill can be selected only with below deck tanks.

Dust Curtain (Optional Hydraulic Lifters, Front and Rear)

Material (rubber nylon reinforced)	6 mm	0.25 in
Enclosed area	4.2 m^2	45.14 ft^2
Split for excess	Front and rear with 305 mm (12 in) overlap	

Hydraulic System

Left and Right Track/Rotation Pump (Closed-loop)		
Type	Axial piston, variable volume	
Maximum flow	283 L/min	75 gal/min
Pressure rating	400 bar	5,800 psi
Fan/Accessory Circuit Pump (Open-loop)		
Type	Axial piston, variable volume	
Maximum flow – dual fan (one per cooler)	273 L/min	72 gal/min
Pressure rating	345 bar	5,000 psi
Track Drive Motors (2)		
Type	Bent-axis fixed volume	
Pressure rating	414 bar	6,000 psi
Rotation Drive Motor		
Type	Axial piston variable volume	
Pressure rating	345 bar	5,000 psi
Fan Drive Motor(s) – Single Fan		
Type	Piston	
Pressure rating (continuous)	414 bar	6,000 psi
Pump Drive Gearbox		
Type	3 pad	
Drive	Rubber coupler/drive shaft to front of engine	
Filtration (all filters have indicators and bypass)		
Loop	12 micron, 2 per loop (optional)	
Charge	3 micron, 1 per loop	
Main return	12 micron absolute	
Case return	12 micron	

Oil Cooling System (Hydraulic Tank)

Reservoir with sight and temperature gauge	643 L	170 gal
Reservoir pressure	Atmospheric, filtered breather	

Lubrication

- Centralized manual (optional auto-lubrication)

Accessories, Tools and Handling Equipment

Drill Pipe (Optional, Price-Adder) – 12 m (39 ft) mast arrangement			
Diameter (customer specification)		114-178 mm	4.5-7.0 in
Wall thickness		19 mm	0.75 in
Length		10.67 m	35 ft
Threads		Depends on pipe diameter	
Diameter	**Wall Thickness**	**Thread**	**Pipe Length**
114 mm (4.5 in)	19 mm (0.75 in)	3 Beco	10.67 m (35 ft)
127 mm (5 in)	19 mm (0.75 in)	3.5 Beco	10.67 m (35 ft)
140 mm (5.5 in)	19 mm (0.75 in)	4 Beco	10.67 m (35 ft)
152 mm (6 in)	19 mm (0.75 in)	4.5 Beco	10.67 m (35 ft)
165 mm (6.5 in)	19 mm (0.75 in)	4.5 Beco	10.67 m (35 ft)
178 mm (7 in)	19 mm (0.75 in)	4.5 Beco	10.67 m (35 ft)

Drill Pipe (Optional, Price-Adder) – 15 m (49 ft) mast arrangement			
Diameter (customer specification)		114-178 mm	4.5-7.0 in
Wall thickness		19 mm	0.75 in
Length		7.62 m	25 ft
Threads		Depends on pipe diameter	
Diameter	**Wall Thickness**	**Thread**	**Pipe Length**
114 mm (4.5 in)	19 mm (0.75 in)	3 Beco	7.62 m (25 ft)
127 mm (5 in)	19 mm (0.75 in)	3.5 Beco	7.62 m (25 ft)
140 mm (5.5 in)	19 mm (0.75 in)	4 Beco	7.62 m (25 ft)
152 mm (6 in)	19 mm (0.75 in)	4.5 Beco	7.62 m (25 ft)
165 mm (6.5 in)	19 mm (0.75 in)	4.5 Beco	7.62 m (25 ft)
178 mm (7 in)	19 mm (0.75 in)	4.5 Beco	7.62 m (25 ft)

Top Adapter Sub		
Diameter	Depends on pipe diameter	
Length	711 mm	28 in
Top thread (API Reg.)	140 mm	5.5 in
Bottom thread	Depends on pipe diameter	

Bit Sub		
Diameter	Depends on pipe diameter	
Length	Up to 3429 mm	Up to 135 in
Top thread	Depends on pipe diameter	
Bottom thread	Depends on pipe diameter	
Table bushing	One (1) piece insert, roller deck bushing or two-piece	

Deck Wrench		
Wrench plate (T1- Steel)	76 mm	3 in
Wrench positioning	Hydraulic cylinder	

HOBO Break-out Wrench	
Location	Outside mast, under pipe rack
Wrench type	Patented HOBO (Hydraulically Operated Break-Out)

Pipe Rack (outside the mast)

Type	Carousel, with stationary pods and breaker plates	
Size of drill pipe/capacity	114-178 mm	4.5-7 in
12 m (39 ft) mast arrangement	4 pods; 10.67 m (35 ft) long pipe	
15 m (49 ft) mast arrangement	2 pods; 7.62 m (25 ft) long pipe	
Pipe rack swing	Hydraulic cylinders (2)	
Pipe rack index	Hydraulic motor through chain drive	

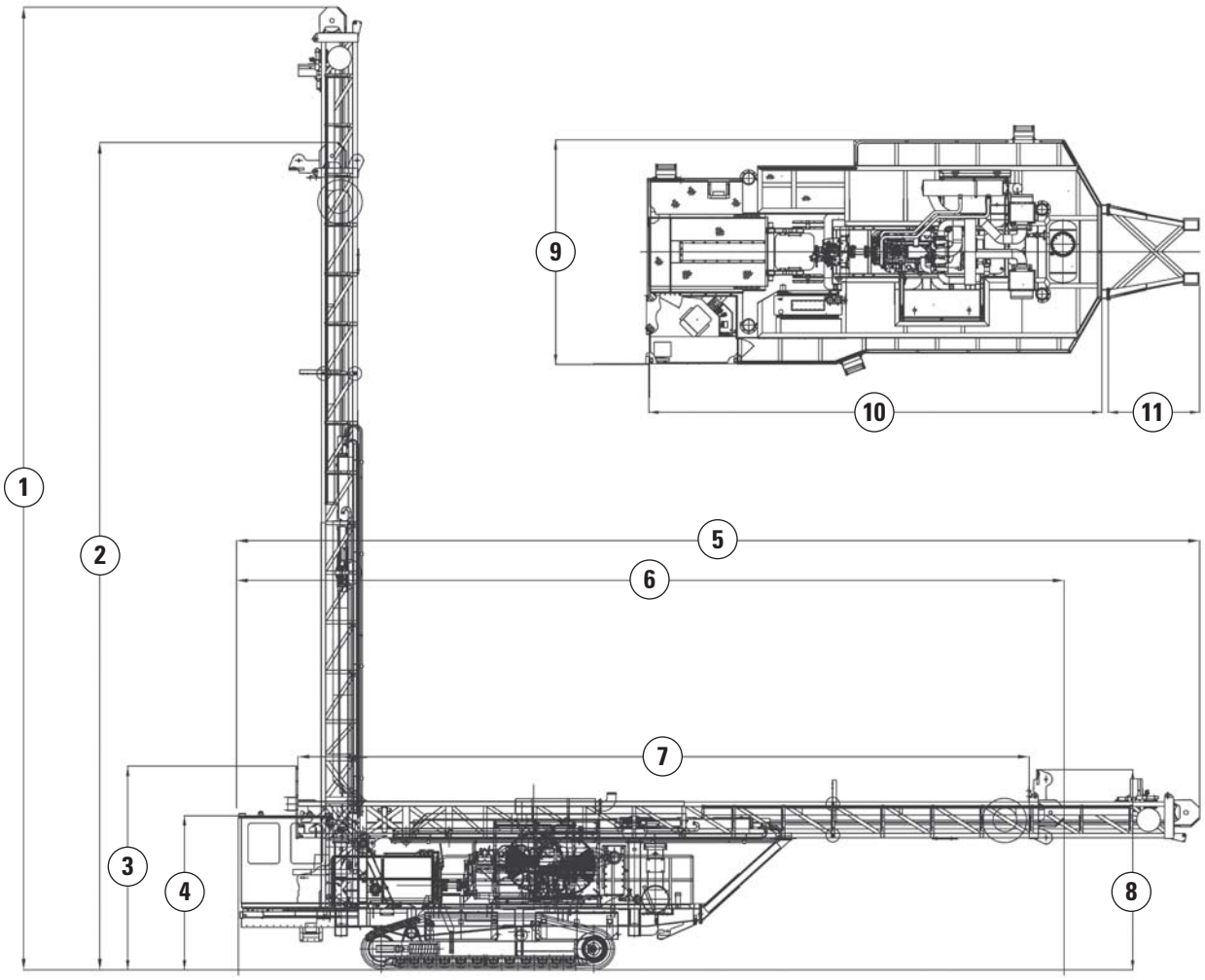
Winch

Rating	3629 kg	8,000 lb
Cable size	13 mm	0.5 in

MD6240 Rotary Drill Specifications

Dimensions

All dimensions are approximate.



1	15 m (49 ft) machine height mast vertical	21.68 m	71.11 ft
2	12 m (39 ft) machine height mast vertical	18.63 m	61.10 ft
3	12 or 15 m (39 or 49 ft) machine height mast horizontal	4.51 m	14.80 ft
4	Cab height from ground level	3.48 m	11.40 ft
5	15 m (49 ft) machine length mast horizontal	21.68 m	71.11 ft
6	12 m (39 ft) machine length mast horizontal	18.63 m	61.10 ft
7	12 m (39 ft) mast bottom to crown	16.40 m	53.83 ft
	15 m (49 ft) mast bottom to crown	19.45 m	63.83 ft
8	Ground level to upper winch arm	4.51 m	14.80 ft
9	Overall machine width	5.06 m	16.59 ft
10	Machine length (less mast and mast rest)	10.20 m	33.45 ft
11	Mast rest length	2.19 m	7.21 ft

Based on MD6240 with 12 m (39 ft) and 15 m (49 ft) mast arrangement.

Basic Shipping Weights and Dimensions

Quantity	Description of Goods	Approximate Dimensions	
Truck one (1)	Model MD6240 (12 m/39 ft), Rotary Blasthole drill comes with Owner/Operator's manual stowed in cab		
	Length	10.82 m	35 ft 6 in
	Width	4.0 m	13 ft 2 in
	Height	3.9 m	12 ft 7 in
	Weight	44 678.5 kg	98,500 lb
Truck two (2)	Mast assembly for Model MD6240 (12 m/39 ft), Rotary Blasthole drill		
	Length	17.7 m	58 ft
	Width	1.9 m	6 ft 4 in
	Height	1.8 m	6 ft 2 in
	Weight	16 329.3 kg	36,000 lb
Truck three (3)	Cab half assembly for Model MD6240 (12 m/39 ft), Rotary Blasthole drill comes with 1 each #89044 filter kit, 2 each Superflex, 2 each brackets, 2 each mast bushings, 2 each dust chute comes with curtain, 2 each clamps, 1 each horseshoe bushing, 1 each bit basket, 1 each lifting bale, 2 each portable fire suppression with brackets, 3 each bag of nuts, bolts, 6 each handrails, 1 each table bushing and cab supports		
	Length	2.29 m	7 ft 6 in
	Width	0.81 m	32 in
	Height	2.51 m	8 ft 2 in
	Weight	635 kg	1,400 lb
Truck three (3)	2 each walkways bundled together with 2 each ladders, toolbox, comes with accessories stowed within, bit sub, dust chute hose and 2 each chutes for hose for MD6240 (12 m/39 ft)		
	Length	5.1 m	16 ft 7 in
	Width	0.9 m	3 ft 2 in
	Height	1.5 m	5 ft
	Weight	2948.3 kg	6,500 lb
Truck three (3)	Mast support rack (mounted off front end) for MD6240 (12 m/39 ft)		
	Length	2.9 m	9 ft 6 in
	Width	2.2 m	7 ft 2 in
	Height	0.4 m	15 in
	Weight	548.8 kg	1,210 lb
Truck three (3)	1 each walkway		
	Length	2.87 m	9 ft 4 in
	Width	0.61 m	2 ft
	Height	1.20 m	4 ft 3 in
	Weight	544.81 kg	1,200 lb

Note: Final dimensions, GVW and corresponding load-out vary based on options selected and final configuration. Performance ratings are based on 100% efficiency, and on engineering specifications and calculations in accordance with accepted industry standards. These capacities will vary with drilling conditions. All specifications are subject to change without notice.

MD6240 Standard Equipment

Standard Equipment

The MD6240 is designed to drill from 152-270 mm (6-10⅝ in) diameter holes with rated pulldown and hoist capacity up to 22 680 kg (50,000 lb), in Rotary or Down the Hole applications.

ENGINE
- Metal turbo and exhaust manifold covers
- Engine pre-lube
- Additional filtration
- Coolant conditioner

MAST
- 152-270 mm (6-10⅝ in) hole diameter
- Up to 22 680 kg (50,000 lb) rated single cylinder pulldown/hoist system
- Up to 24 000 kg (52,911 lb) bit load with one pipe in the drill string
- Patented HOBO (Hydraulically Operated Break-Out) wrench operated from the cab
- Auto cable tensioning system
- 25° angle drilling package and mast locks
- Winch 3629 kg (8,000 lb) capacity

TOP DRIVE
- Single motor
- Rotation speed 0-220 rpm
- Up to 12 880 N·m (9,500 ft-lb) torque

OPERATOR'S CAB
- Integrated FOPS
- Totally enclosed, insulated, two-man cab
- Two (2) hinged doors with heavy duty freezer type door latch system
- Ten (10) windows (safety glass, tinted)
- Windsheild wiper and washer kit
- Ergonomic operator's console with full instrumentation
- Ergonomic operator's seat with head and armrests, retractable seat belt, air suspension mount
- Electric over hydraulic drill functions
- Auxiliary functions operated by fingertip toggle switches
- More than 3 m² (32.4 ft²) of floor space
- Excellent visibility
- dB rating of 80 or less
- Wall mounted air conditioner/heater/pressurizer, belt driven
- Rubber shock-mounts to absorb vibration

UNDERCARRIAGE
- Excavator type, with 10 lower rollers
- 750 mm (29.5 in) triple grousers
- Full length chain guides/rock guards

MAINFRAME AND DECK
- Made of heavily cross-braced rectangular steel tubing
- Rear deck is stationary during both angle and vertical drilling modes
- Viewing hatch in rear deck, hydraulically operated from cab to help spotting holes
- Four (4) hydraulic leveling jacks (152 cm/60 in)
- Dust chamber clean-out door
- Centralized lubrication system (34 points)
- Additional mast rests mounted on non-drill end
- 1325 L (350 gal) fuel tank under engine
  – Additional fuel tank available as option
- 1570 L (415 gal) additional fuel tank under compressor
- 4 × 8D batteries

CAROUSEL
- Hydraulically operated from the cab

COOLING – SPLIT COOLER ARRANGEMENT
- Maximum ambient cooling capacity of 52° C (125° F) with replaceable cores

HYDRAULIC SYSTEM
- Two (2) variable displacement axial piston pumps, in closed loop system, that operate the drill rotation, pulldown/hoist system, and tram functions
- Double-gear pump, in open loop system, for all auxiliary functions and fan circuit
- Dual filtration

DRILLING ACCESSORIES (TRICONE/ROTARY)
- Top sub adapter
- Table bushing
- Bit sub [note: 12 m/39 ft configuration: 342 cm (135 in) S-S, 15 m/49 ft configuration: 152 cm (60 in) S-S]
- Horseshoe bushing
- Bit basket
- Hoist plug (lifting bail)
- Auto tool wrench/deck wrench

DUST SYSTEM
- See Optional Equipment and select the required system

PAINT
- Standard Caterpillar Colors

OTHER
- Backup alarm
- Filter kit for 50-hour preventive maintenance
- Two (2) hard copy sets Operator/Service/Maintenance/Parts/Engine manuals, in English
- One Link-One Parts manual on CD, Operator and Service manual in pdf
- Seven (7) 60-watt LED lights for night drilling
- Side walkways and handrails with side boarding ladder
- Tool box, mounted under walkway (tools not included)
- Lift kit
- Towing hooks (front end)
- Battery disconnect

Mandatory Options – Installed at Factory

ENGINE/COMPRESSOR CHOICES

- Engine/compressor
  - C27 (Tier 2) 597 kW (800 hp) @ 2,100 rpm with single stage compressor 48.1 m³/min @ 6.9 bar (1,700 ft³/min @ 100 psi)
  - Spiral valve feature on 48.1 m³/min (1,700 ft³/min) compressor allows regulation of the air capacity
  - C27 (Tier 2) 597 kW (800 hp) @ 2,100 rpm with two stage compressor 32.6 m³/min @ 10.3/24.1 bar (1,150 ft³/min @ 150/350 psi) split coolers
  - C27 (Tier 2) 597 kW (800 hp) @ 2,100 rpm with two stage compressor 38.3 m³/min @ 10.3/24.1 bar (1,350 ft³/min @ 150/350 psi) split coolers
  - C27, Tier 2, 652 kW (875 hp) @ 2,100 rpm with two stage compressor 42.5 m³/min @ 10.3/24.1 bar (1,500 ft³/min @ 150/350 psi)
  - C27 (Tier 2) 652 kW (875 hp) @ 2,100 rpm with two stage compressor 38.3 m³/min @ 10.3/34.4 bar (1,350 ft³/min @ 150/500 psi) split coolers
  - QST-30C electronic diesel engine (water jacket), 783 kW (1,050 hp) @ 2,100 rpm with two stage compressor 41.8 m³/min @ 10.3/34.4 bar (1,500 ft³/min @ 150/500 psi) split coolers (outside U.S., Canada, EU)
  - QST-30 electronic diesel engine Tier 2 (air-to-air), 672 kW (1,000 hp) @ 2,100 rpm with two stage compressor 41.8 m³/min @ 10.3/34.4 bar (1,500 ft³/min @ 150/500 psi) split coolers

MAST AND CAROUSEL CHOICES

- Mast and carousel – 12 m (39 ft) arrangement: Up to 12.8 m (42 ft) single pass hole depth
  - Mast to suit 10.67 m (35 ft) long pipe plus long bit sub for up to 12.8 m (42 ft) single pass, drill on tracks, changing bit above deck
  - Four pipe carousel using 10.67 m (35 ft) pipes allowing total hole depth up to 55.47 m (182 ft)
  - 114 mm (4½ in) diameter, 19 mm (¾ in) wall thickness pipes (drill pipe not included) ranges to 178 mm (7 in) diameter, 19 mm (¾ in) wall thickness pipes (drill pipe not included)
- Mast and carousel – 15 m (49 ft) arrangement: Up to 15.8 m (52 ft) single pass hole depth
  - For two (2) 7.62 m (25 ft) drill pipe and bit sub for 15.8 m (52 ft) single pass, with a two pipe carousel using 7.62 m (25 ft) pipes allowing total hold depth up to 31.1 m (102 ft)
  - 114 mm (4½ in) diameter, 19 mm (¾ in) wall thickness pipes (drill pipe not included) ranges to 178 mm (7 in) diameter, 19 mm (¾ in) wall thickness pipes (drill pipe not included)

MD6240 Optional Choices – Installed at Factory

Optional Choices – Installed at Factory

DRILLING ACCESSORIES KIT FOR HAMMER DRILLING (IN LIEU OF ROTARY DRILL ACCESSORIES)

- Shock sub and adaptor, bit sub, two-piece table bushing, horseshoe bushing, hoist plug, bit basket, hammer oil injection system with 113.5 L (30 gal) tank

DUST COLLECTION

- Dust Collector 4500 Series
- Water injection system for dust suppression with three (3) tanks totaling 1271 L (336 gal) mounted under the front deck
- Water injection system for dust suppression with total 1514 L (400 gal) tank mounted on top-deck (mounted in place of Dry Dust Collector)

Note: Dry Dust Collector and water injection on the same drill can be selected only with below deck tanks.

DRILLING

- Drill pipe
- Roller deck bushing
- Two-piece (split) deck bushing
- Rotary head RPM gauge, digital
- Rotary torque control
- Rotary/hammer shock sub
- Rock oiler injection system (for Tricone); 113.56 L (30 gal)
- Pipe guide roller assembly mounted on drill deck (rear deck)
- Dual purpose carousel (hammer – Tricone pipe rack)

FLUIDS

- Wiggins fuel only
- Wiggins full service (fuel, hydraulic oil, coolant, engine oil)
- Automatic lubrication system (34 points)
- Drilling pipe thread lube system, activated from inside the cab

SYSTEM PROTECTION

- Additional loop filters between pumps and motors
- Hydraulic diagnostic test station
- Engine mounted stop
- Ground level engine shutdown
- Rotating beacons (one on mast crown, one on cab, one on front-end)

COLD WEATHER AIDS

- WEBASTO system (self-contained heater for engine coolant, water, hydraulic oil, fuel)
- Cab floor heater (electric fan with heater core utilizing engine coolant)
- Heating and circulation/drainage system for water injection installation, for –40° C (–40° F) with gate valve activated by temperature sensor
- Cold weather package for temperatures down to –40° C (–40° F)
  - Two-speed fan arrangement for coolers
  - Electric heating elements for heating of fuel and water tanks, coolant, hydraulic oil tank
  - Insulation of bottom of the cab and fuel tanks
  - Compressor regulators enclosed in insulated box with electric heating element
  - Inlet control cylinder enclosed in a box with electric heating element
  - Cab floor heater – electric fan with heater core utilizing engine coolant
  - Thermo-glass in cab
  - Dead-end arctic hoses @ pivot points
  - Cold weather lubricants
  - Water injection hose (if water injection selected) with insulated sheath-electric heater
  - 40 kW (54 hp) diesel gen-set or on-board transformer to power heating package (mine site to provide plug)

Optional Choices – Installed at Factory (cont'd)

INDICATOR SYSTEMS

- Mast lock indicator
- Jack retract indicators
- Tram interlock, jacks (with indicator)
- Tram interlock, head-position (pipe-in-hole)
- Pipe rack interlock
- Filter indicators, centrally mounted in cab (hydraulic, compressor, air intake)

MISCELLANEOUS

- Sigma TFR7 air conditioner/heating/ pressurizing unit upgrade on standard cab
- Drill efficiency indicator (Thunderbird Pacific DEI Plus) without Logger
- Drill efficiency indicator with Logger
- 24 to 12 volt converter
- Extra lighting package (5 additional 60 watt LED lights)
- Blowdown hose with nozzle
- Hydraulic rear dust curtain lifting system
- Hydraulic front dust curtain lifting system
- CE conformity kit
- Special paint
- Closed circuit camera system with two cameras for front and rear mounting and monitor in cab
- Radio AM/FM, CD player and USB port for I-pod
- Radio C.B. with antenna
- XIR cab glass upgrade
- Thermal double-pane glass upgrade
- Cab window shades
- Remote jump start terminals
- Electric horn activated by push button in the cab
- Gel-cell maintenance free battery upgrade
- Main drill window cage
- Lanyard attachment – cable with traveling hook on mast, and personnel harness
- Tram remote control (pendant/cable) for operation of tram controls from ground
- Winch remote control pendant (control outside cab)
- 24V to 110V or 220V AC invertor
- Mechanical tool kit (reference TV014590)
- Three-point harness kit for operator's seat
- Water injection flow meter
- Cab manometer
- Extreme hot weather lubricant upgrade (compressor oil)
- Extreme hot weather lubricant upgrade (hydraulic oil)
- Basic engine shut down timer
- Murphy EMS panel mounted in cab-dash
- EMS lap top harness/terminal mounted inside cab
- Mirror kit (includes three bolt-on mirrors)
- Slope indicator mounted in cab to indicate forward and lateral angle
- Hydraulic oil temperature gauge mounted in dash
- Document holder mounted inside the cab

MD6240 Rotary Drill

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